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EXAMINER				
GUILL, RUSSELL				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/507,002

Examiner

Russ Guill

Applicant(s)

BRACEWELL, ROBERT H

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2009.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8,10,15,17-19,22,33,41,47,48 and 50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8,10,15,17-19,22,33,41,47,48 and 50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office action is in response to an Amendment filed January 5, 2009. No claims were added or canceled. Claims 1 – 2, 4 – 6, 8, 10, 15, 17 – 19, 22, 33, 41, 47 – 48 and 50 are pending. Claims 1 – 2, 4 – 6, 8, 10, 15, 17 – 19, 22, 33, 41, 47 – 48 and 50 have been examined. Claims 1 – 2, 4 – 6, 8, 10, 15, 17 – 19, 22, 33, 41, 47 – 48 and 50 have been rejected.
2. As previously recited, the Examiner would like to thank the Applicant for the well-prepared response, which was useful in the examination process. The Examiner appreciates the effort to carefully analyze the Office action, and make appropriate arguments and amendments.

Response to Arguments

3. Regarding claims 18, 19, 33, 41, 47, 48, 50 rejected under 35 USC § 112, second paragraph:
 - a. Applicant's arguments and claim amendments have been fully considered, and are persuasive.
4. Regarding claims 47, 48, 50 rejected under 35 USC § 101:
 - a. Applicant's arguments and claim amendments have been fully considered, and are persuasive.
5. Regarding claims 1 and 33 rejected under 35 USC § 103:
 - a. Applicant's arguments have been fully considered, but are not persuasive, as follows.
 - b. The following principles apply:

- i. **The question under 35 U.S.C. § 103 is not merely what the references teach but what they would have suggested to one of ordinary skill in the art at the time the invention was made.** *In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976).
- ii. The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. *See In re Kahn*, 441 F.3d at 987-88; *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991); and *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also **the inferences** which one skilled in the art would reasonably be expected to draw therefrom. *In re Preda*, 401 F.2d 825, 826 (CCPA 1968).
- iii. **Substantial evidence is evidence that “a reasonable mind might accept as adequate to support a conclusion.** *In re Gartside*, 203 F.3d 1305 (Fed. Cir. 2000).
- iv. A claimed invention is not patentable if the subject matter of the claimed invention would have been obvious to a person having ordinary skill in the art. *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007).
- v. The “mere existence of differences between the prior art and an invention does not establish the invention’s nonobviousness.” *Dann v. Johnston*, 425 U.S. 219, 230, 189 USPQ 257, 261 (1976).
- vi. The gap between the prior art and the claimed invention may not be “so great as to render the [claim] nonobvious to one reasonably skilled in the art.” *Id.*
- vii. A prior art reference must be considered together with the knowledge of one of ordinary skill in the pertinent art.

- viii. A reference need not explain every detail since it is speaking to those skilled in the art. *In re Paulsen*.
- ix. One of ordinary skill in the art is presumed to have skills apart from what the prior art references expressly disclose. *In re Sovish*, 769 F.2d 738, 742-743 (Fed. Cir. 1985).
- x. A person of ordinary skill is also a person of ordinary creativity, not an automaton. *KSR*, 127 S. Ct. at 1742.
- xi. The combination of familiar elements according to known methods is likely obvious when the combination does no more than yield predictable results. *KSR*, 127 S. Ct. at 1739.
- c. Obviousness must be determined in light of the knowledge of the ordinary artisan. Prior art is not limited just to the references being applied, but includes the understanding of one of ordinary skill in the art:
 - i. The MPEP recites in section 2121.01:
 - (1) A reference contains an “enabling disclosure” if the public was in possession of the claimed invention before the date of invention. “Such possession is effected if one of ordinary skill in the art could have combined the publication’s description of the invention with his [or her] own knowledge to make the claimed invention.” *In re Donohue*, 766 F.2d 531, 226 USPQ 619 (Fed. Cir. 1985).
- d. The Applicant argues:
 - e. Further, the official action includes numerous underlined portions and struck-through portions – it is unclear as to what the PTO position is – does it include the struck-through portions of discussion or have these been abandoned by the PTO. Clarification is respectfully requested.
 - i. The Examiner respectfully replies:

- ii. The struck-through portions of the claim language in the rejections are provided so that the Applicant can see the context of the portions of the claim being rejected.

f. The Applicant argues starting in the last paragraph of page 16:

g. The Kogan reference is alleged to teach "bi-directional hyperlinks" at column 4, lines 35-55 and between column 1, line 65 and column 2, line 2. The Examiner's interpretation that Kogan has anything to do with Applicant's claimed "directed link between selected nodes" is respectfully traversed. The reference, at column 4, merely discusses hyperlinks as being "bidirectional," meaning it can be traversed in either direction. While such systems of course are well known, it is completely unknown to apply this aspect to a design knowledge information capture tool and there is nothing in Kogan which suggest how the general feature of the claimed "directed link" could be applied, especially to selected nodes representing items of design knowledge stored in different files.

- i. The Examiner respectfully replies:

ii. First, the claimed limitation of "directed link between selected nodes" is taught by Conklin in the rejections below; the Official Notice is used to teach the limitation, "wherein said directed link is bi-directional to permit a user to traverse the link in either direction". Second, the Examiner agrees that such systems using bidirectional hyperlinks were well known. Third, the ordinary artisan would have known how to apply the bidirectional hyperlinks to a design knowledge information capture tool at least because Kogan teaches applying bi-directional hyperlinks in computer windows (*for example, see figure 3*).

h. The Applicant argues on page 17 that Nguyen does not teach a bidirectional hyperlink:

- i. The Examiner respectfully replies:

ii. Please refer to Nguyen at column 4, lines 10 - 11 for a bidirectional hyperlink. The ordinary artisan would have known how to apply the bidirectional hyperlinks to items of design knowledge stored in different files at least because Nguyen teaches applying bi-directional hyperlinks

objects in different files (*for example, see column 7, lines 7 - 40, and especially lines 36 - 40*).

- i. The Applicant argues on page 17 that Weinreich teaches away from bidirectional links in graphical maps:
 - i. The Examiner respectfully replies:
 - ii. Weinreich appears to review limitations of bidirectional links for graphical *Web* applications, and offers a solution also. Disclosed examples and preferred embodiments do not constitute a teaching away from a nonpreferred embodiment. The prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed.
- j. The Applicant argues on page 17 that Hyman does not teach bidirectional links:
 - i. The Examiner agrees, and the reference is removed.
- k. The Applicant argues in the last paragraph of page 17 continuing onto page 18:
 - i. None of the cited references teach the claimed "directed link." It is noted that the Examiner does not allege that Hirose discloses the claimed "directed link" as defined in the claim. In fact, none of Conklin, Hirose or Regli references is cited for teaching the claimed "directed link" which is "bi-directional to permit a user to traverse the link in either direction."
 - i. The Examiner respectfully replies:
 - ii. Conklin is cited as teaching the directed link. The limitation of a bi-directional link is taught by Official Notice. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

m. The Applicant argues on page 18:

n. The Examiner relies solely upon the non-cited Kogan, Nguyen, Weinreich and Hyman references as evidence purportedly showing that bi-directional links between selected nodes which represent "items of design knowledge stored in different files" is somehow common knowledge. The evidence in the citations does not support this contention by the Examiner. Again the Examiner is queried as to where he believes the claimed feature is disclosed in any cited prior art reference or in the four references cited as supporting his claim of Official Notice.

- i. The Examiner respectfully replies:
- ii. As discussed above, the bi-directional links are supported by the references supplied to support the Official Notice.

o. The Applicant argues on page 18:

p. As noted above in the Federal Circuit decision above, the burden is on the Examiner to establish where each claimed structure is disclosed in a combination of prior art references and, thus far, the Examiner has failed to meet this burden. Absent a disclosure of the claimed "directed link between selected nodes" and wherein the selected nodes represent "items of design knowledge stored in different files" somewhere in the patchwork quilt of prior art references, the rejection of the independent claims and claims dependent thereon clearly fails for lack of evidence amounting a *prima facie* case of obviousness.

- i. The Examiner respectfully replies:
- ii. The recited limitations are taught as shown in the rejection below.

q. The Applicant argues on page 19:

r. In section 11(u), the recitation of benefits of the Hirose reference "cost effective, useful and inexpensive design process recorder" is alleged to be the "motivation" why one would combine Hirose with Conklin. However, these benefits have nothing to do with the elements being chosen from Hirose and combined with specific elements of Conklin. There is no indication as to why one of ordinary skill in the art would ignore the other teachings in the Hirose and Conklin references. As a result, the Examiner's statement in section u is merely a conclusory statement reciting generic benefits, i.e., "cost effective," "useful" and "inexpensive." These conclusory statements do not amount to the required explicit "analysis" of the rationale for picking and choosing elements and interrelationships and subsequently combining elements from a plurality of reference.

- i. The Examiner respectfully replies:
- ii. As recited in the rejection below, the motivation for combining the teachings of Hirose with Conklin would have been the benefits recited in Hirose, "cost effective, useful and inexpensive design recorder that benefits design and redesign". A person of ordinary skill is also a person of ordinary creativity, not an automaton. *KSR*, 127 S. Ct. at 1742. Thus, the ordinary artisan would have been motivated to combine the teachings of the recited references to produce the claimed invention.

s. The Applicant argues on pages 19 - 20:

t. In section v, the Examiner again makes a broad sweeping conclusory statement that "to use the art of Regli with the art of Conklin" which presumably includes anything disclosed in Regli and anything disclosed in Conklin, would "provide a great aid to designers" and therefore this is the purported motivation for combining elements. Again, the Examiner simply fails to provide any reason to pick and choose the "directed link" (which he does not even allege is disclosed in Regli) with the other elements of the Conklin reference and the Hirose reference in the manner claimed.

i. The Examiner respectfully replies:

ii. As recited in the rejection below, the motivation for combining the teachings of Regli with Conklin would have been the benefits recited in Regli, "keeping track of design rationale will provide a great aid to designers, and provides a basis for designers to explore more design options", which would have been recognized as a benefit by the ordinary artisan. A person of ordinary skill is also a person of ordinary creativity, not an automaton. *KSR*, 127 S. Ct. at 1742. Thus, the ordinary artisan would have been motivated to combine the teachings of the recited references to produce the claimed invention.

u. The Applicant argues on page 20:

v. Furthermore, the Examiner is suggesting that he is only obligated to provide a motivation for combining elements of Hirose with the Conklin patent and then a separate motivation for combining elements of Regli with the Conklin patent. In fact, the Examiner has to provide a rationale for choosing and picking the elements taken from all three references and then combining them in the manner of Applicant's claims. There has to be some reason why the elements taken from Regli would be combined with the elements taken from Hirose and then why these elements would be combined with the elements disclosed in Conklin. The Examiner has simply provided no explicit "analysis" by which a reviewing court can conclude that he has met his burden of establishing why the elements allegedly taught in the prior art would be combined in the manner of Applicant's claims.

i. The Examiner respectfully replies:

ii. The Examiner asserts that the provided motivations are sufficient for a *prima facie* case of obviousness; however, if the Applicant prefers, the Applicant may interpret the provided motivations as two parts; the first part is motivation to combine the art of Regli with the art of Conklin, and the second part is the motivation to combine the art of Hirose with the art of Conklin as modified by Regli. A person of ordinary skill is also a person of ordinary creativity, not an automaton. *KSR*, 127 S. Ct. at 1742.

iii. The MPEP recites in section 2143:

(1) The rationale to support a conclusion that the claim would have been obvious is that "a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and that there would have been a reasonable expectation of success." *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006).

w. The Applicant argues on page 20:

x. It is Applicant's view that the Examiner has simply utilized hindsight reasoning in picking and choosing elements from Conklin, Hirose, Regli and the purported Official Notice references and then alleging that it would be obvious to combine them in a manner which is taught only by Applicant's independent claims. This is not the standard of obviousness and the Examiner has failed to meet the test set out in KSR.

i. The Examiner respectfully replies:

ii. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

y. The Applicant argues on page 21:

z. Again, while the Examiner has supplemented his previous Official Notice allegations that three prior art references teach "bi-directional hyperlinks" (see page 7, section f, ii), the Examiner ignores the language of Applicant's claim, i.e., "said directed link is bi-directional to permit a user to traverse the link in either direction" and "wherein said selected nodes represent items of design knowledge stored in different files." As noted above, even if there were a disclosure of "bi-directional hyperlinks" in Kogan, Nguyen and Weinreich, there is no reason for one of ordinary skill in the art to believe that the Regli reference teaches any "bi-directional" link, whether a hyperlink or the claimed "directed link" in independent claims 1 and 33.

i. The Examiner respectfully replies:

- ii. The recited limitations are taught as shown in the rejection of claims 1 and 33 below. Applicant's arguments are addressed above.

aa. The Applicant argues on pages 21 - 22:

bb. It is the structure recited in Applicant's claims which must be disclosed in at least one prior art reference in a combination rejection under §103. The Examiner has not indicated how or where Kogan, Nguyen or Weinreich teach Applicant's claimed "directed link" instead of the Examiner's hyperlink. Instead, the Examiner suggests that Applicant's claim language is similar to a hyperlink which is disclosed in Regli and that Regli's hyperlink is similar to bi-directional hyperlinks taught in Kogan, Nguyen and Weinreich and therefore there must be some sort of disclosure in those references which somehow relates to Applicant's claimed invention.

cc. If the Examiner cannot point to where or how a prior art reference teaches a "directed link between selected nodes" which is "bi-directional to permit a user to traverse the link in either direction" and "wherein said selected nodes represent items of design knowledge stored in different files" there is simply no evidentiary disclosure of that claimed element. The Examiner is respectfully requested to either identify where this specifically claimed and defined element is disclosed in any prior art references (of the Official Notice references) or abandon this argument.

- i. The Examiner respectfully replies:
- ii. The recited limitations are taught as shown in the rejection of claims 1 and 33 below.

dd. The Applicant essentially argues on pages 22 - 23 that the Examiner's use of the phrase, "appears to teach" is insufficient to establish a *prima facie* case of obviousness:

- i. The Examiner respectfully replies:
- ii. The Applicant is respectfully requested to interpret the polite phrase, "appears to teach", as the term, "teaches". The rejections of claims 1 and 33 below identify where each of the claimed elements and interrelationships are disclosed in the analogous references, and provides a motivation to combine the teachings of the analogous references, and thus the rejection makes a *prima facie* case of obviousness.

Claim Rejections - 35 USC § 103

- 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 – 2, 4 – 6, 8, 10, 15, 17, 18 – 19, 22, 33, 41, 47, 48, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conklin (Jeff Conklin et al.; “gIBIS: A Hypertext Tool for Exploratory Policy Discussion”, art provided by the Applicant on the Information Disclosure Statement dated December 22, 2004) in view of Hirose (U.S. Patent Number 5,784,286) further in view of Regli (W.C. Regli et al.; “A Survey of Design Rationale Systems: Approaches, Representation, Capture and Retrieval”, 2000, Engineering with Computers, Volume 16, pages 209 – 235).

- a. The art of Conklin is directed to a design knowledge capture tool (unnumbered first page assumed to be page 303).
- b. The art of Hirose is directed to a design knowledge capture tool (column 2, lines 65 - 67).
- c. The art of Regli is directed to a design rationale capture tools (page 209, Abstract).
- d. The art of Conklin and the art of Regli are analogous art because they are both directed to the art of a design knowledge capture tools.
- e. The art of Conklin and the art of Hirose are analogous art because they are both directed to the art of a design knowledge capture tool.

f. Regarding **claim 1**:

g. Conklin appears to teach:

h. a storage means for storing design knowledge information generated or acquired during progress of a first design project, wherein the design knowledge information extends beyond product design information and includes information on evolution of a first design project and causal dependencies between items of said design knowledge (pages 304 – 305, section 2. THE IBIS METHOD, and page 305, figure 1; it would have

been obvious that a storage means was used to store the information)
said storage means comprising a plurality of records files, each file
having a predefined knowledge structure for including a list of issues
to be addressed (page 305, figure 1, box labeled "issue"; figure 1
displays an entity-relationship diagram, and the ordinary artisan would
have known that elements of an entity-relationship diagram were stored
as records with predefined structure);

i. an input means for allowing a user to input information into the
storage means (page 308, figure 5, and explanatory text on page
307, fourth paragraph that starts with, "In this example . . .");

j. A presentation means for presenting a file template ~~of each of said~~
~~plurality of files~~ to the user to allow the information to be input by
the user in said predefined knowledge structure (page 308, figure 5,
and explanatory text on page 307, fourth paragraph that starts with, "In
this example . . .", and fifth paragraph; and page 306, figure 2),
wherein said presentation means presents each said structure as an
array of nodes, each node representing an item of said design knowledge
(page 306, figure 2, left-side panel of the window displays an array of
nodes, each node representing an item of knowledge design), wherein a
dependency between items of said design knowledge is represented by a
directed link between selected nodes (page 306, figure 2, left-side
panel of the window displays an array of nodes with links), wherein
~~said directed link is bi directional to permit a user to traverse the~~
~~link in either direction~~, and wherein said selected nodes represent
items of design knowledge (page 306, figure 2, left-side panel of the
window displays an array of nodes, each node representing an item of
design knowledge) ~~stored in different files.~~

k. Conklin does not specifically teach:

l. said storage means comprising a plurality of ~~records~~ files, each
file ~~having a predefined knowledge structure for including a list of~~
~~issues to be addressed~~;

m. ~~A presentation means for presenting a file template~~ of each of said
plurality of files to the user to allow the information to be input by
the user in said predefined knowledge structure, wherein said

~~presentation means presents each said structure as an array of nodes, each node representing an item of said design knowledge, wherein a dependency between items of said design knowledge is represented by a directed link between selected nodes, wherein said directed link is bi-directional to permit a user to traverse the link in either direction, and wherein said selected nodes represent items of design knowledge stored in different files.~~

n. Hirose appears to teach:

O. presenting a file template of each of said plurality of files (figure 6A; it would have been obvious to the ordinary artisan to use multiple windows for a display).

P. said storage means comprising a plurality of ~~records~~ files, each file having a predefined knowledge structure (figure 5, elements stage records, focus records, sketch/drawing model, and column 7, lines 20 - 35 which recites three "stores") ~~for including a list of issues to be addressed~~

q. Regli appears to teach:

R. said storage means comprising a plurality of ~~records~~ files, each file having a predefined knowledge structure (page 213, figure 2, left-side box labeled "Design Repositories" contains a plurality of files, each file having a predefined knowledge structure).

S. design knowledge stored in different files (page 213, figure 2, left-side box labeled "Design Repositories" contains a plurality of files, each file having a predefined knowledge structure).

t. Official Notice is taken that it was well known at the time of invention in the analogous art of linking electronic documents that a directed link was bidirectional to permit a user to traverse the link in either direction. At the time of invention, it would have been obvious to the ordinary artisan to provide the limitation, "wherein said directed link is bi-directional to permit a user

to traverse the link in either direction". The motivation would have been the major advantage that hyperlinks provide the ability to establish and maintain arbitrary associations between various stored documents. The following references are provided to support the Official Notice:

- i. Kogan (U.S. Patent Number 5,809,317) teaches bi-directional hyperlinks (*column 4, lines 35 - 55, and column 1, lines 65 - 67, and column 2, lines 1 - 2*);
- ii. Nguyen (U.S. Patent Number 5,481,666) teaches bi-directional hyperlinks (*column 4, lines 35 - 40*);
- iii. Harald Weinreich et al., "The Look of the Link - Concepts for the User Interface of Extended Hyperlinks", 2001, Proceedings of the 12th ACM conference on Hypertext and Hypermedia, pages 19 - 28; teaches bi-directional hyperlinks (*page 22, left-side column, section "Bi-directional Links"*);
- u. The motivation to use the art of Hirose with the art of Conklin would have been the benefits recited in Hirose including a cost effective, useful and inexpensive design process recorder that benefits design and redesign (*column 4, lines 9 - 20*).
- v. The motivation to use the art of Regli with the art of Conklin would have been the benefit recited in Regli that keeping track of design rationale will provide a great aid to designers, and provides a basis for designers to explore more design options (*page 209, right-side column, second paragraph that starts with, "Usually a developed . . ."*).
- w. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Hirose and the art of Regli and Official Notice with the art of Conklin to produce the claimed invention.

x. Regarding claims 33, 41, 47, 48, 50:

y. Conklin appears to teach:

z. A method for capturing design knowledge information wherein the information extends beyond product design information and includes information on evolution of a first design project and causal dependencies between items of design knowledge (page 305, figure 1; and page 306, figure 2);

aa. storing the information generated or acquired during progress of a first design project in a storage means (pages 304 - 305, section 2. THE IBIS METHOD, and page 305, figure 1; it would have been obvious that the information was stored), said storage means comprising a plurality of records ~~files~~, each ~~file~~ having a predefined knowledge structure for including a list of issues to be addressed (page 305, figure 1, box labeled "issue"; figure 1 displays an entity-relationship diagram, and the ordinary artisan would have known that elements of an entity-relationship diagram were stored as records with predefined structure);

bb. ~~selecting one of said files and presenting a file template of each of said plurality of files~~ to the user to allow the information to be input by the user in said predefined knowledge structure (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .", and fifth paragraph; and page 306, figure 2), each structure being presented as an array of nodes, each node representing an item of said design knowledge (page 306, figure 2, left-side panel of the window displays an array of nodes, each node representing an item of knowledge design), wherein a dependency between items of said design knowledge is represented by a directed link between selected nodes (page 306, figure 2, left-side panel of the window displays an array of nodes with links), ~~wherein said directed link is bi directional to permit a user to traverse the link in either direction~~, and wherein said selected nodes represent items of design knowledge (page 306, figure 2, left-side panel of the window displays an array of nodes, each node representing an item of design knowledge) ~~stored in different files and~~ inputting information into said file (page 308, figure 5, and explanatory text on page 307, fourth paragraph that starts with, "In this example . . .").

cc. Conklin does not specifically teach:

~~dd. said storage means comprising a plurality of records files, each file having a predefined knowledge structure for including a list of issues to be addressed;~~

~~ee. selecting one of said files and presenting a file template of each of said plurality of files to the user to allow the information to be input by the user in said predefined knowledge structure, each structure being presented as an array of nodes, each node representing an item of said design knowledge, wherein a dependency between items of said design knowledge is represented by a directed link between selected nodes, wherein said directed link is bi-directional to permit a user to traverse the link in either direction, and wherein said selected nodes represent items of design knowledge stored in different files and inputting information into said file;~~

ff. Hirose appears to teach:

gg. said storage means comprising a plurality of ~~records~~ files, each file having a predefined knowledge structure (figure 5, elements stage records, focus records, sketch/drawing model, and column 7, lines 20 - 35 which recites three "stores") ~~for including a list of issues to be addressed.~~

hh. presenting a file template of each of said plurality of files (figure 6A; it would have been obvious to the ordinary artisan to use multiple windows for a display).

ii. Regli appears to teach:

jj. said storage means comprising a plurality of ~~records~~ files, each file having a predefined knowledge structure (page 213, figure 2, left-side box labeled "Design Repositories" contains a plurality of files, each file having a predefined knowledge structure).

kk.design knowledge stored in different files (page 213, figure 2, left-side box labeled "Design Repositories" contains a plurality of files, each file having a predefined knowledge structure).

ll. Official Notice is taken that it was old and well known by the ordinary artisan at the time of invention to select one of a plurality of files in the analogous art of software development. At the time of invention, it would have been obvious to an ordinary artisan to select one of a plurality of files as a design knowledge base. The motivation would have been the knowledge of the ordinary artisan that there would be more than one design knowledge base, and the application program of Conklin would need to select a knowledge base file to use. In support of the Official Notice, please refer to the reference, by Michael I. Hyman et al., "Visual C++ 5 for Dummies", 1997, IDG Books Worldwide, pages 51 and 61 which display a file open menu and a list of files from which to select.

mm. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Hirose and the art of Regli and Official Notice with the art of Conklin to produce the claimed invention.

nn. Official Notice is taken that it was well known at the time of invention in the analogous art of linking electronic documents that a directed link was bidirectional to permit a user to traverse the link in either direction. At the time of invention, it would have been obvious to the ordinary artisan to provide the limitation, "wherein said directed link is bi-directional to permit a user to traverse the link in either direction". The motivation would have been the major advantage that hyperlinks provide the ability to establish and maintain arbitrary associations between various stored documents. The following references are provided to support the Official Notice:

- i. Kogan (U.S. Patent Number 5,809,317) teaches bi-directional hyperlinks (*column 4, lines 35 – 55, and column 1, lines 65 – 67, and column 2, lines 1 – 2*);
- ii. Nguyen (U.S. Patent Number 5,481,666) teaches bi-directional hyperlinks (*column 4, lines 35 – 40*);
- iii. Harald Weinreich et al., “The Look of the Link – Concepts for the User Interface of Extended Hyperlinks”, 2001, Proceedings of the 12th ACM conference on Hypertext and Hypermedia, pages 19 – 28; teaches bi-directional hyperlinks (*page 22, left-side column, section “Bi-directional Links”*);

oo. Regarding **claim 2**:

pp. Conklin appears to teach:

qq. An interactive graph editor (*page 306, figure 2*).

rr. Regarding **claim 4**:

ss. Conklin appears to teach:

tt. in use, a user is prompted by the knowledge structure, to input at least one possible answer to at least one of said issues, the at least one possible answer being stored as one of the, or each, piece of information at the label of the node (*page 307, last paragraph, extending on to page 308, and page 308, figure 5*).

uu. Regarding **claim 5**:

vv. Conklin appears to teach:

ww. the knowledge structure prompts the user to input at least one argument that supports or refutes the possible answer, the at least one argument being stored as one of the, or each, piece of information at the label of the node (*page 305, figure 1, especially the box labeled*

"argument", and page 307, last paragraph, extending on to page 308, and page 308, figure 5).

xx. Regarding claim 6:

yy. Conklin appears to teach:

zz. the at least one argument is classified as a supporting or a refuting argument (page 305, figure 1, especially the links labeled "supports" and "objects-to")).

aaa. Regarding claim 8:

bbb. Conklin appears to teach:

ccc. said at least one argument is classified as a valid or an invalid argument (page 312, figure 11, graph config parameters, element "argument display bias")).

ddd. Regarding claim 10:

eee. Conklin appears to teach:

fff. the at least one answer is classified as an open, an accepted or rejected answer (page 305, second paragraph; answers are open).

ggg. Regarding claim 15:

hhh. Conklin appears to teach:

iii. each node appears once only in the predefined file ~~plurality of files~~ (page 306, figure 2).

jjj. Conklin does not specifically teach:

kkk. A plurality of files.

lll. Regli appears to teach:

mmm. A plurality of files (page 213, figure 2, left-side box labeled "Design Repositories" contains a plurality of files).

nnn. Regarding claim 17:

ooo. Conklin does not specifically teach:

ppp. the, or each, node can be linked to an additional node on the same file.

qqq. Regli appears to teach:

rrr.the, or each, node can be linked to an additional node on the same file (page 224, section 6.1 Navigating Archived Design Rationale, and page 213, left-side column, third paragraphs, REMAP/MM [26] supports hyper-links; it would have been obvious that hyper-links could be linked to a node on the same file).

sss. Regarding claim 18:

ttt. Conklin appears to teach:

uuu. a sub-issue to the at least one predefined issue can be identified and input into the storage means (page 305, figure 1, links to the box "issue", labeled "REPLACES, QUESTIONS OR IS-SUGGESTED-BY").

vvv. Regarding claim 19:

www. Conklin appears to teach:

xxx.a user is prompted to input at least one possible answer to the sub-issue (page 307, last paragraph, extending on to page 308, and page 308, figure 5).

yyy. Regarding claim 22:

zzz. Conklin does not specifically teach:

aaaa. a processing means to identify at least one predefined issue addressed on a first design project, which issue is encountered on a subsequent design project.

bbbb. Regli appears to teach:

cccc. a processing means to identify at least one predefined issue addressed on a first design project, which issue is encountered on a subsequent design project (page 210, right-side column, last sentence, extending on to page 211, and page 224, section 6.1 Navigating Archived

Design Rationale, and page 213, left-side column, third paragraphs, REMAP/MM [26] supports hyper-links; it would have been obvious that hyper-links could be linked to a node on a subsequent design project).

8. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. *The entire reference is considered to provide disclosure relating to the claimed invention.*

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russ Guill whose telephone number is (571)272-7955. The examiner can normally be reached on Monday – Friday 9:30 AM – 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-375353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Russ Guill
Examiner
Art Unit 2123

RG

/Paul L Rodriguez/
Supervisory Patent Examiner,
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